

**NEW HAMPSHIRE
DEPARTMENT OF ENVIRONMENTAL SERVICES
SHELLFISH PROGRAM: 2003 ANNUAL REPORT**



March 2004

New Hampshire Department of Environmental Services
Water Division
Watershed Management Bureau
www.des.nh.gov



**NEW HAMPSHIRE
DEPARTMENT OF ENVIRONMENTAL SERVICES
SHELLFISH PROGRAM: 2003 ANNUAL REPORT**

Prepared by
Chris Nash, DES Shellfish Program Manager

New Hampshire Department of Environmental Services
29 Hazen Drive
Concord, New Hampshire 03301
www.des.nh.gov

Michael P. Nolin, Commissioner
Harry T. Stewart, P.E., Water Division Director

March 2004

*Cover: Digging for Softshell Clams, Hampton/Seabrook Harbor
Photo courtesy of Aquaculture Education and Research Center (used by permission)*

TABLE OF CONTENTS

INTRODUCTION AND PURPOSE OF REPORT	1
PROGRAM ACTIVITIES AND ACCOMPLISHMENTS	1
Monitoring Programs	1
Routine Monitoring	1
Paralytic Shellfish Poisoning Monitoring	8
Shellfish Tissue Testing	8
Pollution Source Identification and Evaluation	9
Sanitary Surveys.....	10
Other Activities	11
Wastewater Treatment Facility Dye Studies	11
Annual Program Review by USFDA	11
Outreach Initiatives	12
Quality Assurance Programs	12
CLOSURES	15
Rainfall/Conditional Closures	15
Emergency Closures.....	16
Paralytic Shellfish Poisoning Closures	17
Seasonal/Marina Closures	19
UPDATE OF GROWING AREA CLASSIFICATIONS	20
Great Bay.....	20
Little Bay.....	20
Piscataqua River.....	23
Bellamy River	25
Little Harbor/Back Channel	26
Atlantic Coast.....	26
Rye Harbor	28
Hampton/Seabrook Harbor	30
CLASSIFICATION SUMMARY	32
Summary of 2003 Classifications	32
Status and Trends of Acres Open for Harvest.....	32
Open/Closed Acre-Days (by Area)	33
CONCLUSIONS AND WORK FOR 2004	34

Acknowledgements

The New Hampshire Department of Environmental Services (DES) Shellfish Program wishes to thank the following people for their assistance with various aspects of the program in 2002:

Joe Cunningham, Natalie Landry, Phil Trowbridge, Carroll Brown, Stephanie Larson, Mona Freese, Rachel Rainey, Katie Callahan, George Hastings, Graham Chantler, and Joanne Keough of DES

Bruce Smith, Ed Cournoyer, Doug Grout, Duncan McInnes, and John Nelson of the New Hampshire Fish and Game Department

Sally Soule of the New Hampshire Coastal Program

Jayne Finnigan, Pete Wickoff, Barbara Purington, and Paul Raiche of the New Hampshire Department of Health and Human Services

Rich Langan of the University of New Hampshire

Captain James Farley of Dover, New Hampshire

Tim Bridges and Tom Faber of the US Environmental Protection Agency/Chelmsford Laboratory

Peter Koufopoulos and Virgil Carr of the US Food and Drug Administration

Ron Sher and Al Legendre of FPL/Seabrook Station

Robin Whittaker of the Isles of Shoals Steamship Company

Paul Jennings, Joe Watts, and Dave Reynolds of the Star Island Corporation

Ann Reid, Candace Dolon, and the volunteers of the Great Bay Coast Watch

The work of the DES Shellfish Program was funded in part by grants from the New Hampshire Estuaries Project and the US Environmental Protection Agency.

List of Tables

Table 1:	WWTF-Related Emergency Closures Implemented in 2003
Table 2:	Seasonal Closures and Reopenings Adjacent to Marinas and Mooring Fields
Table 3:	NSSP Statistics for Stations in Great Bay
Table 4:	NSSP Statistics for Stations in Little Bay
Table 5:	NSSP Statistics for Stations in the Piscataqua River
Table 6:	NSSP Statistics for Stations in the Bellamy River
Table 7:	NSSP Statistics for Stations in Little Harbor
Table 8:	NSSP Statistics for Stations in Back Channel
Table 9:	NSSP Statistics for Stations on the Atlantic Coast/Shore Sites
Table 10:	NSSP Statistics for Stations on the Atlantic Coast/Boat Sites
Table 11:	NSSP Statistics for Stations in Rye Harbor
Table 12:	NSSP Statistics for Stations in Hampton/Seabrook Harbor
Table 13:	NSSP Statistics for Stations in the Hampton Falls and Taylor Rivers
Table 14:	Percent Open Acre-Days for Hampton/Seabrook, Great Bay, Little Bay, and Little Harbor for Calendar Year 2003

List of Figures

Figure 1:	Great Bay, Little Bay, and Bellamy River Monitoring Stations
Figure 2:	Upper Piscataqua River Monitoring Stations
Figure 3:	Lower Piscataqua River, Little Harbor, and Back Channel Monitoring Stations
Figure 4a:	Atlantic Coast (North) and Rye Harbor Monitoring Sites
Figure 4b:	Atlantic Coast (South) Monitoring Sites
Figure 5:	Hampton/Seabrook Estuary Monitoring Sites
Figure 6a:	Hampton/Seabrook Rainfall Closures for 2003 Weekends
Figure 6b:	Little Harbor Rainfall Closures for 2003 Weekends
Figure 7:	Great Bay, Little Bay, and Major Tributaries 2003 Classifications
Figure 8:	Little Bay, Upper Piscataqua River, and Major Tributaries 2003 Classifications
Figure 9:	Lower Piscataqua River, Little Harbor, and Back Channel 2003 Classifications
Figure 10:	Atlantic Coast and Rye Harbor Classifications for 2003
Figure 11:	Hampton/Seabrook Estuary Classifications for 2003
Figure 12:	2003 Estuarine Shellfish Water Classifications
Figure 13:	Trends in Estuarine Shellfish Water Openings, 1993-2003

INTRODUCTION AND PURPOSE OF REPORT

The New Hampshire Department of Environmental Services (DES), under the authority granted by RSA 143:21 and 143:21-a, is responsible for classifying shellfish growing waters in the State of New Hampshire. The purpose of conducting shellfish water classifications is to determine if growing waters are safe for human consumption of molluscan shellfish. DES uses a set of guidelines and standards known as the National Shellfish Sanitation Program (NSSP) for classifying shellfish growing waters. These guidelines were collaboratively developed by state agencies, the commercial shellfish industry, and the federal government in order to provide uniform regulatory standards for the commercial shellfish industry. The NSSP is used by DES to classify all growing waters, whether used for commercial or recreational harvesting, because these standards provide a reliable methodology to protect public health. Furthermore, RSA 485-A:8 (V) states that “Those tidal waters used for growing or taking of shellfish for human consumption shall, in addition to the foregoing requirements, be in accordance with the criteria recommended under the National Shellfish Program Manual of Operation, United States Department of Food and Drug Administration.”

This document represents the fourth Annual Report of the DES Shellfish Program. The preparation of an Annual Report serves two purposes. The first is to comply with the NSSP requirement for an annual review of growing area classifications. The second is to report to the citizens of the State of New Hampshire on the activities and accomplishments of the DES Shellfish Program, to describe water quality status and trends in shellfish growing areas, and to outline future activities to improve water quality and expand harvesting opportunities.

PROGRAM ACTIVITIES AND ACCOMPLISHMENTS

Monitoring Programs

Routine Monitoring

The DES maintains a routine shellfish water-monitoring program in all tidal waters in the State of New Hampshire. The focus of this program is to collect and test water samples for fecal coliform bacteria, which is used as an indicator of contamination from human or animal waste. Data generated by this program are used to annually review shellfish water classifications. Seventy-six stations in the Great Bay Estuary (including the Piscataqua River), Little Harbor/Back Channel, Rye Harbor, the Atlantic Coast, and the Hampton/Seabrook Estuary were sampled on a monthly basis for most of the year in 2003. Almost 800 samples (56 sampling runs) were collected in 2003, in accordance with the Systematic Random Sampling Strategy described in the NSSP. Figures 1-5 depict growing areas and sampling stations. Appendix 1 lists current classification and acreages for all growing waters, while Appendix 2 presents the most recent 30 water samples collected as part of the Systematic Random Sampling program. Water quality in areas currently open to harvesting is generally good, although some sites show rainfall-related impacts that require management on a conditional basis. The 2004 routine shellfish water-monitoring program will be conducted in a manner similar to the 2003 program. Results from the routine monitoring program are reviewed in the “Update of Growing Area Classifications” section of this report.